

LEPROSY IN THE PHILIPPINE ISLANDS AND ITS TREATMENT.¹**BY VICTOR G. HEISER, M.D.,****PASSSED ASSISTANT SURGEON, U. S. PUBLIC HEALTH AND MARINE HOSPITAL SERVICE; DIRECTOR OF HEALTH AND CHIEF QUARANTINE OFFICER FOR THE PHILIPPINE ISLANDS, MANILA.**

NOTWITHSTANDING the comprehensive title of this paper, it is not my intention to discuss the history of leprosy in the Philippine Islands any farther back than the beginning of American occupation, because that is not essential to the practical questions under consideration, and it has already been done in one of my previous papers.²

At the beginning of the period with which this paper deals there were in the Philippines, according to the best record obtainable, between 3500 and 4000 lepers. While it is true that many of the reported cases were, on the application of more accurate diagnostic methods than had at first been employed, found not to be cases of leprosy, there were enough obscure cases overlooked to contraindicate any revision of the figures. There were never any grounds for the estimates ranging from 10,000 to 30,000, which were given circulation in the earlier days of the new regime.

The attempt at partial segregation of the worst cases, which in Spanish times had been begun and carried on by the church authorities as a matter of charity rather than legal proscription, was continued by the Americans, both before and after the establishment of civil government; but a systematic plan which had for its object the reduction of the number of new infections and the ultimate eradication of the disease from the Islands was not begun until 1905, although the island of Culion was selected for this purpose as early as 1901.

This island is well isolated, is roughly 20 by 40 miles in size, and is located about 240 miles from Manila in a southwesterly direction. The lepers are permitted to establish themselves at any place on the island, and if they desire to follow agricultural pursuits, the necessary animals and implements are provided at Government expense. In actual practice, however, it is found that they practically all live in the town of Culion, where everything is furnished for them by the Government. A large modern hospital has been established for those who are bedfast or those who desire to undergo special treatment. The town is located on an elevated site, has a modern water and sewage system, and is practically controlled by regulations and ordinances which the lepers themselves make. If

¹ Read by title at the sixth annual meeting of the American Society of Tropical Medicine, Washington, D. C., April 10, 1909.

² *Leprosy in the Philippine Islands and the Present Methods of Combating the Disease*, Medical Record, June 8, 1907.

the work of collecting lepers could have been rushed through with military rigidity, the problem would have been very much simplified, but it was deemed advisable to precede the collection of the lepers by a campaign of education and thereby secure the coöperation of the public rather than its opposition.

After this preliminary work, the plan adopted and still followed, which the geography of the country so eminently favored, consisted in removing all leprosy patients from the well-isolated islands which contained only a few victims, and subsequently recanvassing the territory two or more times for cases which might have escaped, been overlooked, or which subsequently developed. By the method pursued the greatest amount of territory was freed in the shortest possible time. In military phraseology, the outposts were captured first and the lines gradually moved forward to the strongholds.

Experience has shown that when all of the native lepers have been removed from an island, the people of that island may be safely trusted with the duty of keeping foreign lepers from taking refuge there. The better points of human nature are being utilized in the campaign and often times prove valuable weapons.

Commitment to the Colony does not mean permanent separation from friends and relatives, since provision has been made for restricted visiting under proper safeguards from a neighboring island, on which the non-infected are permitted to camp or to live permanently if they desire, in order that they may be permitted to visit their friends and relatives. The law under which the policy of segregation is carried out probably vests more absolute power in the director of health than the laws of other states or countries. Briefly, he has authority to cause to be apprehended every person who is believed to be a leper, and to detain them if the bacillus of the disease can be demonstrated. Furthermore, it is the duty of all officials and others to report to the director of health any case of leprosy that comes to their knowledge. Failure to do so is punishable by fine.

The results of the segregation policy so far have been very encouraging. On February 1, 1909, according to official figures, there were only 2291 lepers in the Philippine Islands, which fact demonstrated that since May, 1905, when effective segregation was begun, the number of deaths has exceeded the number of new cases by 1409. The falling off in the number of new cases is one of the most encouraging evidences of success. It is estimated from the data on hand that under the old system there were about seven hundred new infections annually. During the past year there have not been more than 300 new cases, a difference of about 57 per cent. If these results can be brought about by incomplete segregation, it can readily be seen that the prospect of ultimately reducing the number to insignificant proportions is very encouraging.

In an address before the Philippine Islands Medical Association, more than two years ago, I held that whatever may be the views of

well-informed persons with regard to the communicability of leprosy, and however widely eminent medical men may differ upon this question, the incontrovertible fact remains that every leper who is capable of giving off lepra bacilli is at least one centre of infection, and that it is an utterly hopeless and useless undertaking to attempt to eradicate the disease without removing the source from which it is transmitted; and I asked that prophylactic medicine should not be turned aside by a few sentimentalists from its march to a goal which offered the magnificent hope of the complete eradication of this plague from the face of the earth and the saving of many innocent human beings who are now sacrificed annually to this most loathsome disease through sheer sentimentality. As more and more experience becomes available, these views are constantly strengthening, and it is believed that the cases which cannot be traced to another case are very few.

The most important factor now in connection with the work in the Philippines is early diagnosis. The earliest and most constant symptom observed is a nasal ulcer which is situated on the nasal septum at the junction of the cartilaginous and bony portion. Among 1200 cases taken in regular order at Culion, these ulcers were noted in 799. It is my opinion that if the remaining septums had been examined microscopically, scar tissue would have been found which would be strongly presumptive evidence that ulcers had existed previously. My experience in the examination of more than two thousand Philippine lepers and of those of Hawaii and of the Louisiana colony near Bruns, confirms the importance and constancy of this sign, which may often be found long before there are any other objective or conscious subjective symptoms. Writers on leprosy give the incubation stage as from three weeks to twenty-seven years. No reliable data have become available here to prove or disprove this theory. Several Americans, whom it is fair to presume were not exposed to the disease in the United States, were found to have the disease within two years of their arrival in the Philippines.

Its extent and effect in different individuals or in the same patient at different times is very variable. I have seen a number of microscopically positive cases in which the only clinical symptom was a nasal ulcer, perhaps very obscure and innocent looking. Such cases usually come from houses in which advanced cases have existed. For this reason it is customary to have those who have been in contact with bad cases examined for this sign and scrapings submitted to a microscopic examination. The precautions enjoined at the leper institutions under the bureau of health is to protect the nasal mucous membrane as a first consideration, giving second place to, but not under-rating the old-time precautions. The membrane of the nose is easily protected by nasal plugs of sterilized absorbent cotton.

With regard to the types of the disease in the Philippine Islands, a fair estimate may be found from the fact that of 1200 cases studied

in the order of admission, 374 were of the anesthetic type, 157 of the tubercular type, and 650 partaking of the character of both, or mixed cases. It was observed that in a majority of cases the integrity of the eyebrows was disturbed. Among the 1200, the eyebrows had been entirely destroyed in 264 cases, and in 599 cases they were half gone. In the remainder of the cases there was generally some impairment of the appendages sufficient to constitute some degree of expressional deformity.

TREATMENT. As health officers, we are naturally more interested in preventing the disease and in the protection of the public than in the care or relief of the individual, yet no remedy within the realm of reason, whether physiological or empirical, has been neglected. Potassium iodide, mercury, creosote, salicylic acid, chaulmoogra oil, gurgon oil, leprol, nastin "B," experimental sera, and the x -rays have all been tried without curative effect, except the x -rays, which have proved successful in a few cases, but from our present experience can by no means be regarded as being suitable as a routine treatment. The cases in which they are apparently of value is in the early stage of the tubercular type in young and otherwise healthy subjects. The breaking down by the x -rays of one large, leprous granuloma of an individual usually results in marked coincident improvement in the granulomas situated in parts of the body far removed, and to which the x -rays have not been applied. One of the cases successfully treated by this method was recently reported.³

San Lazaro Hospital at Manila was the first institution in the world to use the x -ray treatment for leprosy with any degree of success, but this was probably due to the fact that there were a larger number of cases to choose from and the particular type which yielded to this form of treatment came under observation early. Chaulmoogra oil so far has not proved of value, but owing to the excellent results obtained in Louisiana by Dyer with the crude oil, another thorough test of this treatment is being made.

CONCLUSIONS. 1. The experience in the Philipinnes during the past three years demonstrates that segregation has decreased the incidence of leprosy by over 50 per cent.

2. Of all the treatments tried, the x -rays is the only one which produced a cure, but as yet it is suitable only for specially selected cases.

³ Preliminary Notes upon a Case of Leprosy apparently Cured with the x -Rays. Medical Record, October 31, 1908.